

CLAIMS

[1] A method of diagnosing a system, comprising the steps of:
performing in a batch two or more kinds of diagnoses selected from
5 the group consisting of a trap operation diagnosis for diagnosing
operational conditions of a plurality of evaluation target steam traps in a
client's evaluation target system, a fluid leakage diagnosis for diagnosing
leakage of fluid from respective portions of an evaluation target piping in
the evaluation target system, a system improvement diagnosis for
10 diagnosing need or no need of system improvement in the construction of
the evaluation target system, and a maintenance improvement diagnosis
for diagnosing need or no need of improvement in a maintenance system
currently adopted by the evaluation target system;

reporting in a batch to the client the results of the plurality of
15 kinds of diagnoses performed;

wherein in reporting the result of the trap operation diagnosis, the
method reports an economic advantage obtained through reduction in
trap-passed steam loss by replacing or repairing all the evaluation target
steam traps, the trap-passed steam loss being calculated based on the
20 result of the trap operation diagnosis;

in reporting the result of the fluid leakage diagnosis, the method
reports an economic advantage obtained through reduction in fluid leakage
loss by repairing leaking portions in the entire evaluation target piping, the
fluid leakage loss being calculated based on the result of the fluid leakage
25 diagnosis;

in reporting the result of the system improvement diagnosis, the
method reports an economic advantage obtained through improvement in a
system construction found needing improvement by the system
improvement diagnosis; and

30 in reporting the result of the maintenance improvement diagnosis,

the method reports an economic advantage obtained through improvement in the maintenance system found needing improvement by the maintenance system diagnosis.

5 [2] The system diagnosing method according to claim 1, wherein the batch performing of two or more kinds of diagnoses is completed within one diagnosing day and within this diagnosing day, the batch reporting of the diagnoses performed is carried out.

10 [3] The system diagnosing method according to claim 1, wherein in the trap operation diagnosis, operational conditions of a plurality of steam traps selected from the evaluation target steam traps are diagnosed; and

15 in the calculation of the trap-passed steam loss for all of the evaluation target steam traps based on the result of the trap operation diagnosis, this calculation is effected deductively, based on the result of the diagnosis for said plurality of steam traps and information relating to a ratio between the number of said plurality of steam traps and the total number of the evaluation target steam traps.

20 [4] The system diagnosing method according to any one of claims 1-3, wherein in the fluid leakage diagnosis, fluid leakage from respective portions of a part of the evaluation target piping are diagnosed; and

25 in the calculation of the fluid leakage for the entire evaluation target piping, this calculation is effected deductively, based on the result of the diagnosis for said part of the evaluation target piping and evaluation amount ratio information between said part of the evaluation target piping and entire evaluation target piping.

30 [5] A method of operating an aggregating system for system

diagnosis having an inputting means, a calculating means and a data generating means, the method comprising the steps of:

receiving, by said inputting means, inputs of result of a trap operation diagnosis performed by a trap diagnotor for diagnosing operational conditions of a plurality of evaluation target steam traps in a client's evaluation target system and result of a fluid leakage diagnosis performed by a leakage diagnotor for diagnosing leakage of fluid from respective portions of an evaluation target piping in the evaluation target system;

calculating, by said calculating means, a trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and a fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the entire piping for each type of fluid; and

generating, by said data generating means and based on the calculation results of said calculating means, comprehensive evaluation data having contents indicative of at least a total trap-passed steam loss amount and a total fluid leakage loss amount for each fluid type.

[6] A method of operating an aggregating system for system diagnosis having an inputting means, a calculating means and a data generating means, the method comprising the steps of:

receiving, by said inputting means, inputs of result of a trap operation diagnosis performed by a trap diagnotor for diagnosing operational conditions of a plurality of evaluation target steam traps in a client's evaluation target system and result of a fluid leakage diagnosis performed by a leakage diagnotor for diagnosing leakage of fluid from respective portions of an evaluation target piping in the evaluation target system;

calculating, by said calculating means, a total trap-passed steam

loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid;

5 calculating also, by said calculating means, a sum total steam loss amount obtained by adding together a total fluid leakage loss amount for steam included in the total fluid leakage loss amount for each fluid type and the trap-passed steam loss amount; and

 generating, by said data generating means and based on the
10 calculation results of said calculating means, comprehensive evaluation data having contents indicative of at least the total fluid leakage loss amount for each fluid type from which said total fluid leakage loss amount for steam has been subtracted and said sum total steam loss amount.

15 [7] A method of operating an aggregating system for system diagnosis having an inputting means, a calculating means and a data generating means, the method comprising the steps of:

 receiving, by said inputting means, inputs of result of a trap operation diagnosis performed by a trap diagnotor for diagnosing
20 operational conditions of a plurality of evaluation target steam traps in a client's evaluation target system and result of a fluid leakage diagnosis performed by a leakage diagnotor for diagnosing leakage of fluid from respective portions of an evaluation target piping in the evaluation target system;

25 receiving inputs of a total receiving steam amount and a total necessary steam amount of the target system or a total unknown steam amount which is a difference between the total receiving steam amount and the total necessary steam amount;

 calculating, by said calculating means, a total trap-passed steam
30 loss amount obtained by aggregating trap-passed steam loss amounts for all

the evaluation target steam traps and a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid;

5 calculating a sum total steam loss amount obtained by adding
together a total fluid leakage loss amount for steam included in the total
fluid leakage loss amount for each fluid type and the trap-passed steam loss
amount and calculating, based on the total receiving steam amount and the
total necessary steam amount or the total unknown steam amount, a ratio
10 of the sum total steam loss amount relative to the total unknown steam
amount which is a difference between said total receiving steam amount
and said total necessary steam amount, as an improvable unknown steam
ratio; and

 generating, by said data generating means and based on the
calculation results of said calculating means, comprehensive evaluation
15 data having contents indicative of at least the total fluid leakage loss
amount for each fluid type from which said total fluid leakage loss amount
for steam has been subtracted and said improvable unknown steam ratio.

[8] A method of operating an aggregating system for system
20 diagnosis having an inputting means, a calculating means and a data
generating means, the method comprising the steps of:

 receiving, by said inputting means, inputs result of a trap
operation diagnosis performed by a trap diagnotor for diagnosing
operational conditions of some steam traps selected from a plurality of
25 evaluation target steam traps in a client's evaluation target system, result
of a fluid leakage diagnosis performed by a leakage diagnotor for diagnosing
leakage of fluid from respective portions of an evaluation target piping in
the evaluation target system and information relating to a ratio between
the number of said plurality of stream traps selected and the total number
30 of the evaluation target steam traps;

calculating, by said calculating means and based on the result of the trap operation diagnosis and the number ratio information inputted to the inputting means, a deduced value of a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid;

generating, by said data generating means and based on the calculation results of said calculating means, comprehensive evaluation data having contents indicative of at least the deduced value of the total trap-passed steam loss amount and the total fluid leakage loss amount for each fluid type.

[9] A method of operating an aggregating system for system diagnosis having an inputting means, a calculating means and a data generating means, the method comprising the steps of:

receiving, by said inputting means, inputs result of a trap operation diagnosis performed by a trap diagnotor for diagnosing operational conditions of some steam traps selected from a plurality of evaluation target steam traps in a client's evaluation target system, result of a fluid leakage diagnosis performed by a leakage diagnotor for diagnosing leakage of fluid from respective portions of an evaluation target piping in the evaluation target system and information relating to a ratio between the number of said plurality of stream traps selected and the total number of the evaluation target steam traps;

calculating, by said calculating means and based on the result of the trap operation diagnosis and the number ratio information inputted to the inputting means, a deduced value of a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and a total fluid leakage loss amount

obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid;

calculating also, by said calculating means, a sum total steam loss amount obtained by adding together a total fluid leakage loss amount for steam included in the total fluid leakage loss amount for each fluid type and the deduced value of the trap-passed steam loss amount; and

generating, by said data generating means and based on the calculation results of said calculating means, comprehensive evaluation data having contents indicative of at least the total fluid leakage loss amount for each fluid type from which said total fluid leakage loss amount for steam has been subtracted and said sum total steam loss amount.

[10] A method of operating an aggregating system for system diagnosis having an inputting means, a calculating means and a data generating means, the method comprising the steps of:

receiving, by said inputting means, inputs result of a trap operation diagnosis performed by a trap diagnotor for diagnosing operational conditions of some steam traps selected from a plurality of evaluation target steam traps in a client's evaluation target system, result of a fluid leakage diagnosis performed by a leakage diagnotor for diagnosing leakage of fluid from respective portions of an evaluation target piping in the evaluation target system and information relating to a ratio between the number of said plurality of stream traps selected and the total number of the evaluation target steam traps;

receiving inputs of a total receiving steam amount and a total necessary steam amount of the target system or a total unknown steam amount which is a difference between the total receiving steam amount and the total necessary steam amount;

calculating, by said calculating means and based on the result of the trap operation diagnosis and the number ratio information inputted to

the inputting means, a deduced value of a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid;

calculating a sum total steam leakage amount obtained by adding together a total fluid leakage loss amount for steam included in the total fluid leakage loss amount for each fluid type and the deduced value of the trap-passed steam loss amount and calculating, based on the total receiving steam amount and the total necessary steam amount or the total unknown steam amount, a ratio of the sum total steam loss amount relative to the total unknown steam amount which is a difference between said total receiving steam amount and said total necessary steam amount, as an improvable unknown steam ratio; and

generating, by said data generating means and based on the calculation results of said calculating means, comprehensive evaluation data having contents indicative of at least the total fluid leakage loss amount for each fluid type from which said total fluid leakage loss amount for steam has been subtracted and said improvable unknown steam ratio.

[11] A method of operating an aggregating system for system diagnosis having an inputting means, a calculating means and a data generating means, the method comprising the steps of:

receiving, by said inputting means, inputs result of a trap operation diagnosis performed by a trap diagnotor for diagnosing operational conditions of a plurality of evaluation target steam traps in a client's evaluation target system, result of a fluid leakage diagnosis performed by a leakage diagnotor for diagnosing leakage of fluid from respective portions of a part of an evaluation target piping in the evaluation target system and evaluation amount ratio information between said part

of the evaluation target piping and entire evaluation target piping;

calculating, by said calculating means and based on the result of the trap operation diagnosis inputted to the inputting means, a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis and the evaluation amount ratio information inputted to the inputting means, a deduced value of a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid; and

generating, by said data generating means and based on the calculation results of said calculating means, comprehensive evaluation data having contents indicative of at least the total trap-passed steam loss amount and the deduced value of the total fluid leakage loss amount for each fluid type.

[12] A method of operating an aggregating system for system diagnosis having an inputting means, a calculating means and a data generating means, the method comprising the steps of:

receiving, by said inputting means, inputs result of a trap operation diagnosis performed by a trap diagnotor for diagnosing operational conditions of a plurality of evaluation target steam traps in a client's evaluation target system, result of a fluid leakage diagnosis performed by a leakage diagnotor for diagnosing leakage of fluid from respective portions of a part of an evaluation target piping in the evaluation target system and evaluation amount ratio information between said part of the evaluation target piping and entire evaluation target piping;

calculating, by said calculating means and based on the result of the trap operation diagnosis inputted to the inputting means, a total trap-passed steam loss amount obtained by aggregating trap-passed steam

loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis and the evaluation amount ratio information inputted to the inputting means, a deduced value of a total fluid leakage loss amount obtained by aggregating fluid leakage
5 loss amounts from the respective portions of the piping for each type of fluid;

calculating also, by said calculating means, a sum total steam leakage amount obtained by adding together a deduced value of a total fluid leakage loss amount for steam included in the deduced value of the total
10 fluid leakage loss amount for each fluid type and the trap-passed steam loss amount; and

generating, by said data generating means and based on the calculation results of said calculating means, comprehensive evaluation data having contents indicative of at least the deduced value of the total
15 fluid leakage loss amount for each fluid type from which said deduced value of total fluid leakage loss amount for steam has been subtracted and said sum total steam leakage amount.

[13] A method of operating an aggregating system for system
20 diagnosis having an inputting means, a calculating means and a data generating means, the method comprising the steps of:

receiving, by said inputting means, inputs result of a trap operation diagnosis performed by a trap diagnotor for diagnosing operational conditions of a plurality of evaluation target steam traps in a
25 client's evaluation target system, result of a fluid leakage diagnosis performed by a leakage diagnotor for diagnosing leakage of fluid from respective portions of a part of an evaluation target piping in the evaluation target system and evaluation amount ratio information between said part of the evaluation target piping and entire evaluation target piping;

30 receiving inputs of a total receiving steam amount and a total

necessary steam amount of the target system or a total unknown steam amount which is a difference between the total receiving steam amount and the total necessary steam amount;

calculating, by said calculating means and based on the result of
5 the trap operation diagnosis inputted to the inputting means, a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis and the evaluation amount ratio information inputted to the inputting means, a deduced value
10 of a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid;

calculating also, by said calculating means, a sum total steam leakage amount obtained by adding together a deduced value of a total fluid
15 leakage loss amount for steam included in the deduced value of the total fluid leakage loss amount for each fluid type and the trap-passed steam loss amount; and calculating, based on the total receiving steam amount and the total necessary steam amount or the total unknown steam amount inputted to the inputting means, a ratio of the sum total steam loss amount
20 relative to the total unknown steam amount which is a difference between said total receiving steam amount and said total necessary steam amount, as an improvable unknown steam ratio; and

generating, by said data generating means and based on the calculation results of said calculating means, comprehensive evaluation
25 data having contents indicative of at least the deduced value of the total fluid leakage loss amount for each fluid type from which the deduced value of said total fluid leakage loss amount for steam has been subtracted and said improvable unknown steam ratio.

30 [14] A method of operating an aggregating system for system

diagnosis having an inputting means, a calculating means and a data generating means, the method comprising the steps of:

receiving, by said inputting means, inputs result of a trap operation diagnosis performed by a trap diagnotor for diagnosing operational conditions of some steam traps selected from a plurality of evaluation target steam traps in a client's evaluation target system, result of a fluid leakage diagnosis performed by a leakage diagnotor for diagnosing leakage of fluid from respective portions of a part of an evaluation target piping in the evaluation target system, information relating to a ratio between the number of said plurality of stream traps selected and the total number of the evaluation target steam traps and evaluation amount ratio information between said part of the evaluation target piping and entire evaluation target piping;

calculating, by said calculating means and based on the result of the trap operation diagnosis and the number ratio information inputted to the inputting means, a deduced value of a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis and the evaluation amount ratio information inputted to the inputting means, a deduced value of a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid; and

generating, by said data generating means and based on the calculation results of said calculating means, comprehensive evaluation data having contents indicative of at least the deduced value of the total trap-passed steam loss amount and the deduced value of the total fluid leakage loss amount for each type of fluid.

[15] A method of operating an aggregating system for system diagnosis having an inputting means, a calculating means and a data

generating means, the method comprising the steps of:

receiving, by said inputting means, inputs result of a trap operation diagnosis performed by a trap diagnotor for diagnosing operational conditions of some steam traps selected from a plurality of evaluation target steam traps in a client's evaluation target system, result of a fluid leakage diagnosis performed by a leakage diagnotor for diagnosing leakage of fluid from respective portions of a part of an evaluation target piping in the evaluation target system, information relating to a ratio between the number of said plurality of stream traps selected and the total number of the evaluation target steam traps and evaluation amount ratio information between said part of the evaluation target piping and entire evaluation target piping;

calculating, by said calculating means and based on the result of the trap operation diagnosis and the number ratio information inputted to the inputting means, a deduced value of a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis and the evaluation amount ratio information inputted to the inputting means, a deduced value of a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid;

calculating also, by said calculating means, a sum total steam leakage amount obtained by adding together a deduced value of a total fluid leakage loss amount for steam included in the deduced value of the total fluid leakage loss amount for each fluid type and the deduced value of the trap-passed steam loss amount; and

generating, by said data generating means and based on the calculation results of said calculating means, comprehensive evaluation data having contents indicative of at least the deduced value of the total fluid leakage loss amount for each fluid type from which the deduced value

of said total fluid leakage loss amount for steam has been subtracted and said sum total steam loss amount.

5 [16] A method of operating an aggregating system for system diagnosis having an inputting means, a calculating means and a data generating means, the method comprising the steps of:

receiving, by said inputting means, inputs result of a trap operation diagnosis performed by a trap diagnotor for diagnosing operational conditions of some steam traps selected from a plurality of evaluation target steam traps in a client's evaluation target system, result of a fluid leakage diagnosis performed by a leakage diagnotor for diagnosing leakage of fluid from respective portions of a part of of an evaluation target piping in the evaluation target system, information relating to a ratio between the number of said plurality of stream traps selected and the total number of the evaluation target steam traps and evaluation amount ratio information between said part of the evaluation target piping and entire evaluation target piping;

receiving inputs of a total receiving steam amount and a total necessary steam amount of the target system or a total unknown steam amount which is a difference between the total receiving steam amount and the total necessary steam amount;

calculating, by said calculating means and based on the result of the trap operation diagnosis and the number ratio information inputted to the inputting means, a deduced value of a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis and the evaluation amount ratio information inputted to the inputting means, a deduced value of a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid;

calculating also, by said calculating means, a sum total steam leakage amount obtained by adding together a deduced value of a total fluid leakage loss amount for steam included in the deduced value of the total fluid leakage loss amount for each fluid type and the deduced value of the trap-passed steam loss amount; and calculating, based on the total receiving steam amount and the total necessary steam amount or the total unknown steam amount, a ratio of the sum total steam loss amount relative to the total unknown steam amount which is a difference between said total receiving steam amount and said total necessary steam amount, as an improvable unknown steam ratio; and

generating, by said data generating means and based on the calculation results of said calculating means, comprehensive evaluation data having contents indicative of at least the deduced value of the total fluid leakage loss amount for each fluid type from which the deduced value of said total fluid leakage loss amount for steam has been subtracted and said improvable unknown steam ratio.

[17] The method of operating an aggregating system for system diagnosis according to any one of claims 5-16, wherein at said receiving step, said inputting means receives, in addition to the inputs relating to the trap operation diagnosis and the fluid leakage diagnosis, a result of a system improvement diagnosis performed on a system construction of the target system or a result of a maintenance method diagnosis performed on a maintenance method currently adopted by the target system; and

at said data generating step, said data generating means generates, as said comprehensive evaluation data, data having, in addition to said contents based on the calculation results of the calculating means, the result of the system improvement diagnosis or the result of the maintenance improvement diagnosis inputted to said inputting means.

[18] An aggregating system for system diagnosis, comprising:

inputting means for receiving from a trap diagnotor an a result of a trap operation diagnosis performed by this trap diagnotor for diagnosing operational conditions of a plurality of evaluation target steam traps in a client's evaluation target system and receiving from a leakage diagnotor result of a fluid leakage diagnosis performed by this leakage diagnotor for diagnosing leakage of fluid from respective portions of an evaluation target piping in the evaluation target system; and

calculating means for calculating, based on the result of the trap operation diagnosis inputted to the inputting means, a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis inputted to the inputting means, a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid.

[19] An aggregating system for system diagnosis, comprising:

inputting means for receiving from a trap diagnotor a result of a trap operation diagnosis performed by this trap diagnotor for diagnosing operational conditions of a plurality of evaluation target steam traps in a client's evaluation target system and receiving from a leakage diagnotor result of a fluid leakage diagnosis performed by this leakage diagnotor for diagnosing leakage of fluid from respective portions of an evaluation target piping in the evaluation target system; and

calculating means for calculating, based on the result of the trap operation diagnosis inputted to the inputting means, a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis inputted to the inputting means, a total fluid leakage loss amount obtained by aggregating fluid leakage loss

amounts from the respective portions of the piping for each type of fluid;
and

5 said calculating means also calculating a sum total steam loss
amount obtained by adding together a total fluid leakage loss amount for
steam included in the total fluid leakage loss amount for each fluid type and
the trap-passed steam loss amount.

[20] An aggregating system for system diagnosis, comprising:

10 inputting means for receiving from a trap diagnotor a result of a
trap operation diagnosis performed by this trap diagnotor for diagnosing
operational conditions of a plurality of evaluation target steam traps in a
client's evaluation target system and receiving from a leakage diagnotor
result of a fluid leakage diagnosis performed by this leakage diagnotor for
diagnosing leakage of fluid from respective portions of an evaluation target
15 piping in the evaluation target system;

 said inputting means receiving also a total receiving steam amount
and a total necessary steam amount of the target system or a total
unknown steam amount which is a difference between the total receiving
steam amount and the total necessary steam amount;

20 calculating means for calculating, based on the result of the trap
operation diagnosis inputted to the inputting means, a total trap-passed
steam loss amount obtained by aggregating trap-passed steam loss
amounts for all the evaluation target steam traps and calculating, based on
the result of the fluid leakage diagnosis inputted to the inputting means, a
25 total fluid leakage loss amount obtained by aggregating fluid leakage loss
amounts from the respective portions of the piping for each type of fluid;

 said calculating means calculating also a sum total steam loss
amount obtained by adding together a total fluid leakage loss amount for
steam included in the total fluid leakage loss amount for each fluid type and
30 the trap-passed steam loss amount and calculating, based on the total

receiving steam amount and the total necessary steam amount or the total unknown steam amount, a ratio of the sum total steam loss relative to the total unknown steam amount which is a difference between said total receiving steam amount and said total necessary steam amount, as an
5 improvable unknown steam ratio.

[21] An aggregating system for system diagnosis, comprising:

inputting means for receiving, from a trap diagnotor, result of a trap operation diagnosis performed by this trap diagnotor for diagnosing
10 operational conditions of some steam traps selected from a plurality of evaluation target steam traps in a client's evaluation target system, and receiving, from a leakage diagnotor, result of a fluid leakage diagnosis performed by this leakage diagnotor for diagnosing leakage of fluid from respective portions of an evaluation target piping in the evaluation target
15 system and receiving also information relating to a ratio between the number of said plurality of stream traps selected and the total number of the evaluation target steam traps;

calculating means for calculating, based on the result of the trap operation diagnosis and the number ratio information inputted to the
20 inputting means, a deduced value of a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis inputted to the inputting means, a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts
25 from the respective portions of the piping for each type of fluid.

[22] An aggregating system for system diagnosis, comprising:

inputting means for receiving, from a trap diagnotor, result of a trap operation diagnosis performed by this trap diagnotor for diagnosing
30 operational conditions of some steam traps selected from a plurality of

evaluation target steam traps in a client's evaluation target system, and receiving, from a leakage diagnotor, result of a fluid leakage diagnosis performed by this leakage diagnotor for diagnosing leakage of fluid from respective portions of an evaluation target piping in the evaluation target system and receiving also information relating to a ratio between the number of said plurality of stream traps selected and the total number of the evaluation target steam traps;

calculating means for calculating, based on the result of the trap operation diagnosis and the number ratio information inputted to the inputting means, a deduced value of a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis inputted to the inputting means, a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid; and

said calculating means calculating also a sum total steam loss amount obtained by adding together a total fluid leakage loss amount for steam included in the total fluid leakage loss amount for each fluid type and the deduced value of the trap-passed steam loss amount.

[23] An aggregating system for system diagnosis, comprising:

inputting means for receiving, from a trap diagnotor, result of a trap operation diagnosis performed by this trap diagnotor for diagnosing operational conditions of some steam traps selected from a plurality of evaluation target steam traps in a client's evaluation target system, and receiving, from a leakage diagnotor, result of a fluid leakage diagnosis performed by this leakage diagnotor for diagnosing leakage of fluid from respective portions of an evaluation target piping in the evaluation target system and receiving also information relating to a ratio between the number of said plurality of stream traps selected and the total number of

the evaluation target steam traps;

said inputting means receiving also inputs of a total receiving steam amount and a total necessary steam amount of the target system or a total unknown steam amount which is a difference between the total receiving steam amount and the total necessary steam amount;

calculating means for calculating, based on the result of the trap operation diagnosis and the number ratio information inputted to the inputting means, a deduced value of a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis inputted to the inputting means, a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid; and

said calculating means calculating also a sum total steam loss amount obtained by adding together a total fluid leakage loss amount for steam included in the total fluid leakage loss amount for each fluid type and the deduced value of the trap-passed steam loss amount and calculating, based on the total receiving steam amount and the total necessary steam amount or the total unknown steam amount inputted to the inputting means, a ratio of the sum total steam loss amount relative to the total unknown steam amount which is a difference between said total receiving steam amount and said total necessary steam amount, as an improvable unknown steam ratio.

[24] An aggregating system for system diagnosis, comprising:

inputting means for receiving, from a trap diagnotor and a leakage diagnotor, inputs result of a trap operation diagnosis performed by this trap diagnotor for diagnosing operational conditions of a plurality of evaluation target steam traps in a client's evaluation target system, result of a fluid leakage diagnosis performed by this leakage diagnotor for diagnosing

leakage of fluid from respective portions of a part of an evaluation target piping in the evaluation target system and receiving also evaluation amount ratio information between said part of the evaluation target piping and entire evaluation target piping;

5 calculating means for calculating, based on the result of the trap operation diagnosis inputted to the inputting means, a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating also, based on the result of the fluid leakage diagnosis and the evaluation
10 amount ratio information inputted to the inputting means, a deduced value of a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid.

15 [25] An aggregating system for system diagnosis, comprising:
 inputting means for receiving, from a trap diagnotor and a leakage diagnotor, inputs result of a trap operation diagnosis performed by this trap diagnotor for diagnosing operational conditions of a plurality of evaluation
20 leakage diagnosis performed by this leakage diagnotor for diagnosing leakage of fluid from respective portions of a part of an evaluation target piping in the evaluation target system and receiving also evaluation amount ratio information between said part of the evaluation target piping and entire evaluation target piping;

25 calculating means for calculating, based on the result of the trap operation diagnosis inputted to the inputting means, a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating also, based on the result of the fluid leakage diagnosis and the evaluation
30 amount ratio information inputted to the inputting means, a deduced value

of a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid; and

5 said calculating means calculating also a sum total steam loss amount obtained by adding together a deduced value of a total fluid leakage loss amount for steam included in the deduced value of the total fluid leakage loss amount for each fluid type and the trap-passed steam loss amount.

10 [26] An aggregating system for system diagnosis, comprising:

 inputting means for receiving, from a trap diagnotor and a leakage diagnotor, inputs result of a trap operation diagnosis performed by this trap diagnotor for diagnosing operational conditions of a plurality of evaluation target steam traps in a client's evaluation target system, result of a fluid leakage diagnosis performed by this leakage diagnotor for diagnosing leakage of fluid from respective portions of a part of an evaluation target piping in the evaluation target system and receiving also evaluation amount ratio information between said part of the evaluation target piping and entire evaluation target piping;

20 said inputting means receiving also a total receiving steam amount and a total necessary steam amount of the target system or a total unknown steam amount which is a difference between the total receiving steam amount and the total necessary steam amount;

 calculating means for calculating, based on the result of the trap operation diagnosis inputted to the inputting means, a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis and the evaluation amount ratio information inputted to the inputting means, a deduced value of a total fluid leakage loss amount obtained by aggregating fluid leakage loss

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amounts from the respective portions of the piping for each type of fluid;
and

5 said calculating means calculating also a sum total steam loss
amount obtained by adding together a deduced value of a total fluid leakage
loss amount for steam included in the deduced value of the total fluid
leakage loss amount for each fluid type and the trap-passed steam loss
amount and calculating, based on the total receiving steam amount and the
total necessary steam amount or the total unknown steam amount, a ratio
occupied of the sum total steam loss amount relative to the total unknown
10 steam amount which is a difference between said total receiving steam
amount and said total necessary steam amount, as an improvable unknown
steam ratio.

[27] An aggregating system for system diagnosis, comprising:
15 inputting means for receiving, from a trap diagnotor, result of a
trap operation diagnosis performed by this trap diagnotor for diagnosing
operational conditions of some steam traps selected from a plurality of
evaluation target steam traps in a client's evaluation target system, and
receiving, from a leakage diagnotor, result of a fluid leakage diagnosis
20 performed by this leakage diagnotor for diagnosing leakage of fluid from
respective portions of a part of an evaluation target piping in the evaluation
target system and receiving also information relating to a ratio between the
number of said plurality of stream traps selected and the total number of
the evaluation target steam traps and evaluation amount ratio information
25 between said part of the evaluation target piping and entire evaluation
target piping; and

 calculating means for calculating, based on the result of the trap
operation diagnosis and the number ratio information inputted to the
inputting means, a deduced value of a total trap-passed steam loss amount
30 obtained by aggregating trap-passed steam loss amounts for all the

evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis and the evaluation amount ratio information inputted to the inputting means, a deduced value of a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid.

[28] An aggregating system for system diagnosis, comprising:
inputting means for receiving, from a trap diagnotor, result of a trap operation diagnosis performed by this trap diagnotor for diagnosing operational conditions of some steam traps selected from a plurality of evaluation target steam traps in a client's evaluation target system, and receiving, from a leakage diagnotor, result of a fluid leakage diagnosis performed by this leakage diagnotor for diagnosing leakage of fluid from respective portions of a part of an evaluation target piping in the evaluation target system and receiving also information relating to a ratio between the number of said plurality of stream traps selected and the total number of the evaluation target steam traps and evaluation amount ratio information between said part of the evaluation target piping and entire evaluation target piping;
calculating means for calculating, based on the result of the trap operation diagnosis and the number ratio information inputted to the inputting means, a deduced value of a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis and the evaluation amount ratio information inputted to the inputting means, a deduced value of a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid; and
said calculating means calculating also a sum total steam loss amount obtained by adding together a deduced value of a total fluid leakage

loss amount for steam included in the deduced value of the total fluid leakage loss amount for each type of fluid and the deduced value of the total trap-passed steam loss amount.

5 [29] An aggregating system for system diagnosis, comprising:

 inputting means for receiving, from a trap diagnotor, result of a trap operation diagnosis performed by this trap diagnotor for diagnosing operational conditions of some steam traps selected from a plurality of evaluation target steam traps in a client's evaluation target system, and
10 receiving, from a leakage diagnotor, result of a fluid leakage diagnosis performed by this leakage diagnotor for diagnosing leakage of fluid from respective portions of a part of an evaluation target piping in the evaluation target system and receiving also information relating to a ratio between the number of said plurality of stream traps selected and the total number of
15 the evaluation target steam traps and evaluation amount ratio information between said part of the evaluation target piping and entire evaluation target piping;

 said inputting means receiving also a total receiving steam amount and a total necessary steam amount of the target system or a total
20 unknown steam amount which is a difference between the total receiving steam amount and the total necessary steam amount;

 calculating means for calculating, based on the result of the trap operation diagnosis and the number ratio information inputted to the inputting means, a deduced value of a total trap-passed steam loss amount
25 obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis and the evaluation amount ratio information inputted to the inputting means, a deduced value of a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the
30 respective portions of the piping for each type of fluid; and

said calculating means calculating also a sum total steam loss amount obtained by adding together a deduced value of a total fluid leakage loss amount for steam included in the deduced value of the total fluid leakage loss amount for each fluid type and the trap-passed steam loss amount and calculating, based on the total receiving steam amount and the total necessary steam amount or the total unknown steam amount inputted to the inputting means, a ratio of the sum total steam loss amount relative to the total unknown steam amount which is a difference between said total receiving steam amount and said total necessary steam amount, as an improvable unknown steam ratio.